

C++ Namespace

Dr. Md. Humayun Kabir
CSE Department, BUET

C++ Namespace

- Namespaces allow to group entities like classes, objects (variables) and functions under a name.
- Global scope is divided into "sub-scopes", each one with its own name.
- Useful in the case that there is a possibility that a global object or function uses the same identifier as another one, causing redefinition errors.

C++ Namespace

- The format of namespaces is:
namespace identifier {
 entities
}
- Identifier is any valid identifier
- Entities is the set of classes, objects and functions that are included within the namespace

C++ Namespace

```
#include <iostream>
using namespace std;
namespace first {
    int var = 5;
}
namespace second {
    double var = 3.1416;
}
int main () {
    cout << first::var << endl;
    cout << second::var << endl;
    return 0;
}
```

C++ Namespace

```
#include <iostream>  
using namespace std;  
namespace first {  
    int x = 5;  
    int y = 10;  
}  
namespace second {  
    double x = 3.1416;  
    double y = 2.7183;  
}
```

C++ Namespace

```
int main () {  
    using first::x;  
    using second::y;  
    cout << x << endl;  
    cout << y << endl;  
    cout << first::y << endl;  
    cout << second::x << endl;  
    return 0;  
}
```

C++ Namespace

```
int main () {  
    using first;  
    cout << x << endl;  
    cout << y << endl;  
    cout << second::x << endl;  
    cout << second::y << endl;  
    return 0;  
}
```

C++ Namespace

```
int main () {  
    {  
        using namespace first;  
        cout << x << endl;  
    }  
    {  
        using namespace second;  
        cout << x << endl;  
    }  
    return 0;  
}
```



```
cout<<"Thank You"<<endl;
```

```
cout<<"Have a Good Day"<<endl;
```